A Study of the Distribution Patterns of the Michigan Curriculum Framework and Best Practices CD-ROM

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Executive Summary

Background

In 1996 Congress enacted the Technology Literacy Challenge Fund, which challenged the federal government, states, educators, and local communities to share the responsibility of strengthening technological literacy in America's schools in the 21st Century. The intent of this program was two-fold: 1) to channel funds to local education agencies through state governments and 2) to provide a framework that states and local communities could use to develop their own action plans. To assist states in writing their individualized framework, the Technology Plan was divided into four pillars: training, hardware, access and connectivity, and content resources.

In 1997, the State of Michigan enacted a state Technology Literacy Challenge Grant by providing federal directed funds and a framework for districts that supported the outlined federal and state technology plan. The goal of Michigan's plan was to "strengthen and enhance the statewide elementary and secondary curriculum through the integration of instructional technologies." Tied to this goal were three of the four federally suggested pillars: content resources, training, and technology integration (e.g., hardware, access and connectivity), which were supported through a variety of instructional technological efforts geared toward "strengthening and enhancing statewide curriculum." These three pillars were supported in the production of an instructional CD-ROM containing the Michigan Curriculum Framework and a collection of Best Practices in Technology Lesson Plans (MCF/BP CD-ROM).

During the 1998-1999 school year, state Regional Educational Media Center (REMC) Associations in collaboration with Intermediate School Districts (ISD) and

Regional Service Agencies (RSA) distributed five copies of the MCF/BP CD-ROM to each public and private school building in the State of Michigan. Utilizing a hierarchical training model, REMCs coordinated and facilitated training sessions and distributed CDs to constituent ISDs. ISDs were responsible for training and distribution within their local service area. The Great Lakes Education Network (GLEN) devised the statewide training schedule.

Purpose and Methods of the Study

The present study was undertaken to trace the dissemination patterns of the MCF/BP CD-ROM. The project was guided by a qualitative design, which included the use of questionnaires and recorded phone interviews relating to the interviewee's knowledge of distribution and location of the CD. Participants, who were targeted based upon their involvement in the distribution of the MCF/BP CD-ROM, included 20 REMC directors and a random sample of seven CD distributors and nine teachers. Analysis of data followed a four-phase process which included: highlighting data from interview transcripts for further analysis, coding raw data for reassembly into shared meaning, confirming and disconfirming patterns of themes, and validating findings and conclusions.

Findings

By way of conclusion, we present our interpretation of the findings and discuss their implications. Before we present our conclusions, we must caution our readers that the sample of our third population, i.e. the end users or the teachers, is very small. It should by no means be considered a representative sample of all teachers in Michigan. However, these teachers revealed a consistent pattern that can be viewed as typical and

thought-provoking. The qualitative nature of the data gives us in-depth look into the dissemination of technology–based innovations. Based on the data, we reach the following conclusions:

1. There is a great need for the product in schools. Over 1500 hard copies have been purchased by schools.
2. Overall, the original dissemination plan seemed reasonable in that it takes advantage of the existing dissemination network in the education system. It also considers training as key to successful dissemination, which is consistent to the literature on professional development and innovation diffusion.
3. The dissemination plan seemed to have worked well at the first level: from developer to level-one distributors. As the findings suggest, all the level-one distributors (i.e., REMC directors) had access to the CD and were prepared to provide training and the CD to the second level distributors, that is, district level or building level distributors. The plan worked less successfully with the second-level distributors with 70% held training sessions for distribution. However, the plan worked even less successfully at the last stage: from trainers/distributors to the end users. As noted, virtually none of the teachers received any training, and half of the teachers did not know where to obtain the CD.
4. Actual uses of the MCM/BP-CD were very limited. The most frequent usage included only two out of nine teachers using it no more than three times.

There are many possible reasons to account for the fact that a well-designed product and a well-developed dissemination failed to be used by its recipients. In this case,

we believe the following are the primary reasons contributing to the failure of successful dissemination of the MCF/BP-CDs:

1. Lack of awareness of the significance and value of the CD. The end users, and some of the distributors, were not fully aware of the value of the CD, because they were not properly trained. In some cases, the training was conceived as only technical, which led to the discontinuation or downplaying of training, because some distributors thought the navigation was very straightforward and simple.
2. Lack of awareness of the CD's existence or where to obtain one. Some teachers did not even know such a thing existed, or among the ones who had heard about the CDs, many did not know how to obtain one. As mentioned previously, many schools purchased hardcopies, or perhaps downloaded copies from the Web, instead of using the CDs, which were free and arguably easier to use.
3. Incompatibility with local plans/practices. Some believed that the content of the CD (the best practices part) was not as good as what they already had.
4. Inefficient dissemination infrastructure. The dissemination followed a conventional process of information flow in the education system, which however, did not seem to be effective. Apparently, school administrators, technology directors, specialists, and teachers seem to have different ways to access information about innovations, and they definitely do not operate in a hierarchical fashion. In other words, a direct chain of command from MDE or REMC to teachers does not exist.

Recommendations

In light of these findings and the literature on innovation diffusions, we make the following recommendations:

1. The training should be much more about the content and how it could be used by teachers and schools, instead of focusing on the technical aspects of the product.
2. Dissemination should directly involve the target audiences, in this case, teachers.
3. The product can also be disseminated through professional development opportunities offered by the State, ISD, or school districts. University programs aimed at providing professional development to teachers are a less commonly used channel of dissemination. It would be beneficial to provide information or the product to university instructors of courses that focus directly on the professional development of teachers.